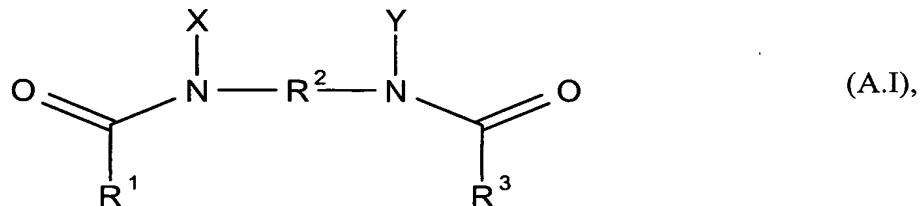


Claims:

1. A surfactant composition comprising
 - (A) 1 to 90 wt%, referring to the total amount of components (A) and (B), of one or more gemini surfactant(s) and,
 - (B) referring to the remainder, based on the total of components (A) and (B), at least one additional detergent component with poor initial foaming characteristics.
2. The surfactant composition of Claim 1, **characterized in that** the surfactant composition comprises
 - (A) 20 to 60 wt%, referring to the components (A) and (B), of one or more gemini surfactant(s) and,
 - (B) referring to the remainder, based on the total of components (A) and (B), one or more detergent component(s).
3. A surfactant composition according to any one of the preceding claims further comprising
 - (C) at least 0.1 wt% water, referring to the total composition.
4. A surfactant composition according to any one of the preceding claims further comprising
 - (D) at least 0.1 wt% of one or more oil component(s), referring to the total composition.
5. A surfactant composition according to any one of the preceding claims, which comprises as a detergent component sulfosuccinates, acyllactylates, alkyl polyglucosides, alkyl isethionates, acylated protein condensates, betaines, and/or acylglutamates.
6. A surfactant composition according to any one of the preceding claims, **characterized in that** the surfactant composition comprises as a detergent acyllactylates, alkylisethionates, and/or acylglutamates.
7. A surfactant composition according to any one of the preceding claims, **characterized in that** the surfactant composition comprises as a detergent component acyllactylates and/or acylglutamates.

8. A surfactant composition according to any one of the preceding claims, **characterized in that** the surfactant composition comprises as a detergent component sodium-, potassium-, magnesium-, or calcium salts of at the hydroxyl group of linear or branched, saturated or non-adjacently mono- to triunsaturated, cyclic or acyclic carboxylic acids with C₆ to C₂₄ esterified monomeric lactic acid, or the oligomers thereof, the oligomerization degree of the lactic acid being in the range of from 1.1 to 10, preferably 1.1 to 4.
9. A surfactant composition according to any one of the preceding claims, **characterized in that** the gemini surfactant comprises nitrogen atoms at the link between spacer, hydrophilic group, and hydrophobic group.
10. A surfactant composition according to any one of the preceding claims, **characterized in that** the gemini surfactant or the blend thereof comprises an amine- or amide-group-containing spacer with 1 to 12 carbon atoms.
11. A surfactant composition according to any one of the preceding claims, **characterized in that** the gemini surfactant comprises a hydrophobic double group with a C₆- to C₂₄-hydrocarbon residue each and/or a hydrophilic double (head) group comprising at least one alkoxylated residue bearing a sulfonic acid-, carboxylic acid-, phosphonic acid -, polyalcohol-, or polyalkylene oxide group, which can also be present in salt form.
12. A surfactant composition according to any one of the preceding claims or to any one of claims 28 to 32, **characterized in that** the surfactant composition comprises 1 to 30 wt% of component (A), referring to the total amount of ionic, preferably anionic surfactants, which are no gemini surfactants in conformity with component (A).
13. A surfactant composition according to any one of the preceding claims or to any one of claims 28 to 32, characterized in that the components (A) and (B) are present in the whole composition in a total amount of from 0.1 to 40 wt%, preferably 0.1 to 10 wt%.

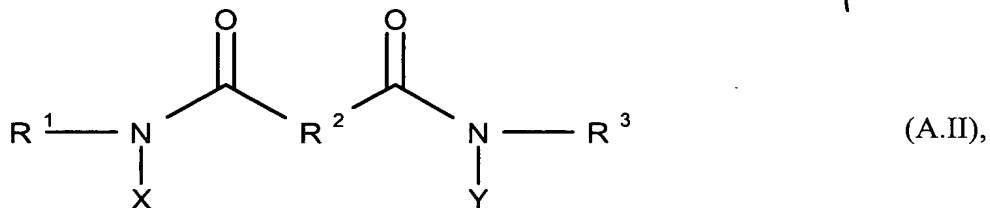
14. A surfactant composition according to any one of claims 1 to 13, **characterized in that** the gemini surfactant has the general formula (A.I)



wherein the substituents have the following meanings:

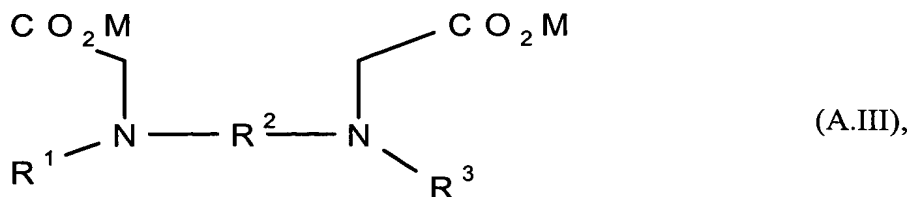
- R¹, R³** C₅- to C₂₅-alkyl, branched or unbranched, saturated, optionally as far as non-adjacently diunsaturated;
R² C₁- to C₁₂-alkylene;
X, Y (C₂H₄O-)_x(C₃H₆O-)_y-FR; x+y ≥ 1, x: 0-15, y: 0-10 ; and
FR -SO₃M, -CH₂-CO₂M, -P(O)(OM)₂, H, -C₃H₆SO₃M, -CH₂(CHOH)₄CH₂OH, insofar as x+y=0, wherein M = alkali, (alkyl)ammonium, alkanol ammonium, H, or ½ alkaline earth.

15. A surfactant composition according to any one of claims 1 to 13, **characterized in that** the gemini surfactant has the general formula (A.II)



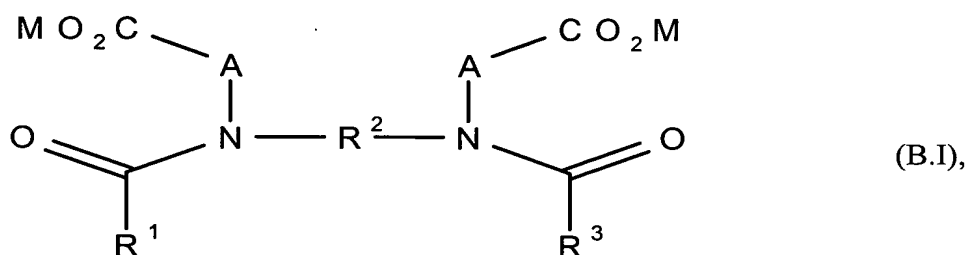
wherein the substituents have the meanings as defined by the general formula (A.I) of claim 14.

16. A surfactant composition according to any one of claims 1 to 13, **characterized in that** the gemini surfactant has the general formula (A.III)



wherein the substituents have the meanings as defined by the general formula (A.I) of claim 14.

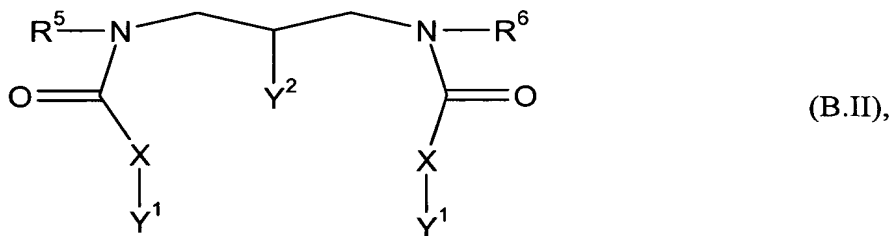
17. A surfactant composition according to any one of claims 1 to 13, characterized in that the gemini surfactant has the general formula (B.I)



wherein the substituents have the following meanings:

- R^1, R^3 C₅- to C₂₅-alkyl, branched or unbranched, saturated, optionally as far as non-adjacently diunsaturated;
 R^2 C₁- to C₁₂-alkylene
 A CHR⁴, CH₂, C₂H₄, C₃H₆, C₄H₈;
 R^4 aminocarboxylic acid radical, and
 M alkali, (alkyl)ammonium, alkanol ammonium, H, or ½ alkaline earth.

18. A surfactant composition according to any one of claims 1 to 13, characterized in that the gemini surfactant has the general formula (B.II)



wherein the substituents have the meanings as defined by the general formula (B.I) of claim 17 and

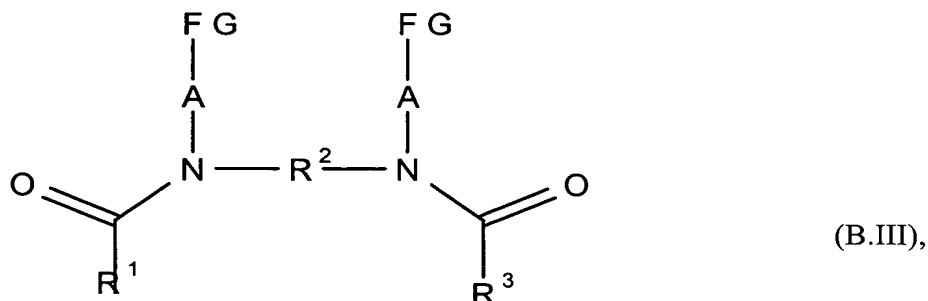
- R^5, R^6 represent C₆- to C₃₆-alkyl, branched or unbranched, saturated, optionally as far as non-adjacently diunsaturated;

X is an alkylene- or alkenylene group having from 1 to 6 carbon atoms, which may be substituted with a hydroxyl group or a sulfonic acid group or a carboxy group;

Y¹ is a sulfonate- or sulfate group or a carboxyl group, and

Y² represents a hydroxyl group, a sulfuric acid residue, or -O-(CO)X-COOH.

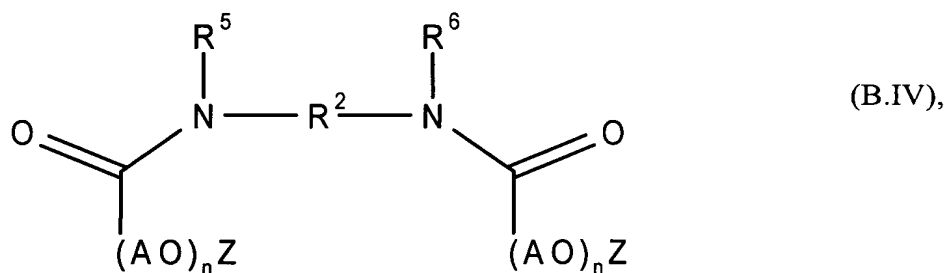
19. A surfactant composition according to any one of claims 1 to 13, **characterized in that** the gemini surfactant has the general formula (B.III)



wherein the substituents have the meanings as defined by the general formula (B.I) of claim 17 and

FG represents -COOM or -SO₃M.

20. A surfactant composition according to any one of claims 1 to 13, **characterized in that** the gemini surfactant has the general formula (B.IV)

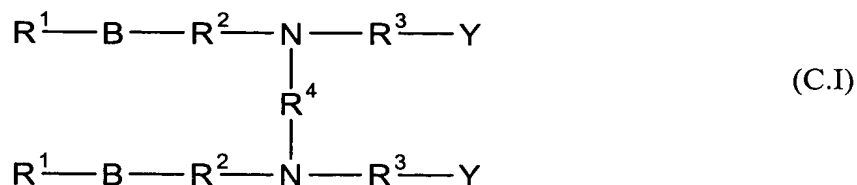


wherein the substituents have the meanings as defined by the general formulas (B.I) of claim 17 and (B.II) of claim 18 and

AO represents alkylene oxide units, i.e. ethyleneglycol-, propyleneglycol-, and butyleneglycol' ether units, alone or arranged randomly or blockwise, wherein n = 1 to 20, and

Z is -SO₃M, -C₂H₄SO₃M, -C₃H₆SO₃M, -P(O)(OM)₂, -CH₂-COOM, or -C₂H₄-COOM.

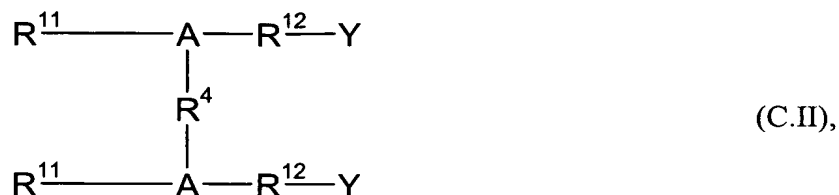
21. A surfactant composition according to any one of claims 1 to 13, **characterized in that** the gemini surfactant has the general formula (C.I),



wherein the substituents have the following meanings:

- R¹** C₅- to C₂₅-alkyl, branched or unbranched, saturated, optionally as far as non-adjacently diunsaturated, hydroxy-substituted or perfluorinated;
- R²** C₁- to C₁₂-alkylene or hydroxy-substituted derivatives thereof;
- B** an amide group [-C(O)N(R²)- or -N(R⁵)C(O)-], a carboxyl group [-C(O)O- or -OC(O)-], a polyether group [-O(R⁶-O)_x-];
- R⁵** C₁- to C₄-alkyl or hydroxy-substituted alkyl or H;
- R⁶** C₂- to C₄-alkylene;
- x** a number from 1 to 20;
- R³** C₁- to C₁₂-alkyl or hydroxy-substituted derivatives thereof, R⁷-D-R⁷ or a polyether group [-O(R⁶-O)_x-];
- R⁷** C₁- to C₆- alkylene or hydroxy-substituted derivatives thereof;
- D** -O-, -S-, -N(R⁸)-;
- R⁴** alkylene or alkylaryl having from 1 to 12 carbon atoms or the hydroxy-substituted derivatives or R⁹-D¹-R⁹;
- R⁸** C₁- to C₁₂-alkyl or hydroxy-substituted alkyl or H or R⁹-D¹-R⁹;
- R⁹** C₁- to C₆-alkylene or hydroxy-substituted derivatives thereof or aryl;
- D¹** -O-, -S-, -SO₂-, -C(O)-, [-O(R⁷-O)_x-], (R¹⁰)_t[N(R¹⁰)]_z, or aryl;
- R¹⁰** C₁- to C₁₂-alkyl or hydroxy-substituted alkyl or H or aryl;
- t, z** are independently a number from 1 to 4, and
- Y** is independently -SO₃H, O-SO₃H, -OP(O)(OH)₂, -P(O)(OH)₂, -COOH, -CO₂-C₆H₄-SO₃H or the salts thereof.

22. A surfactant composition according to any one of claims 1 to 13, **characterized in that** the gemini surfactant has the general formula (C.II)



wherein the substituents have the meanings as defined by the general formula (C.I) of claim 21 and

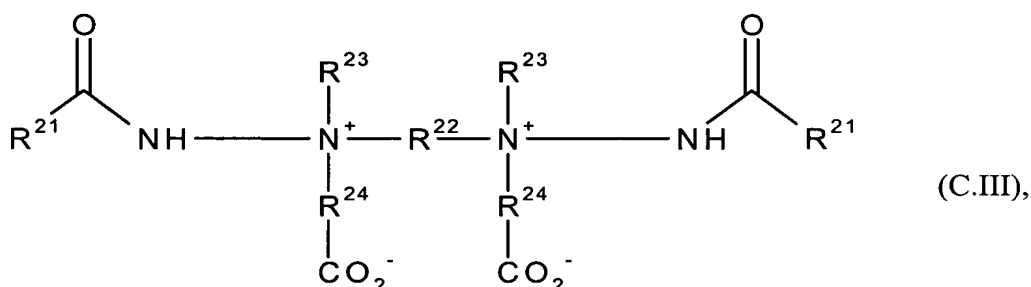
R^{11} is C_5 - to C_{23} -alkyl, branched or unbranched, saturated, optionally as far as non-adjacently diunsaturated, hydroxy-substituted or perfluorinated or R^{14} -B- R^2 ;

R^{14} is C_1 - to C_{12} -alkyl, branched or unbranched, saturated, optionally as far as non-adjacently diunsaturated, or the hydroxy-substituted derivatives;

R^{12} means C_1 - to C_{12} -alkylene, branched or unbranched, saturated, optionally as far as non-adjacently diunsaturated, or the hydroxy-substituted derivatives, or an amide group $[-C(O)N(R^2)-$ or $-N(R^5)C(O)-]$, a carboxyl group $[-C(O)O-$ or $-OC(O)-]$, a polyether group $[-O(R^6-O)_x-]$ or R^9 -D¹- R^9 and

A is $-CR^6=$ or $-N=$, if whenever A is equal to $-N=$, R^{11} represents R^{14} -B- R^2 .

23. A surfactant composition according to any one of claims 1 to 13, **characterized in that** the gemini surfactant has the general formula (C.III)



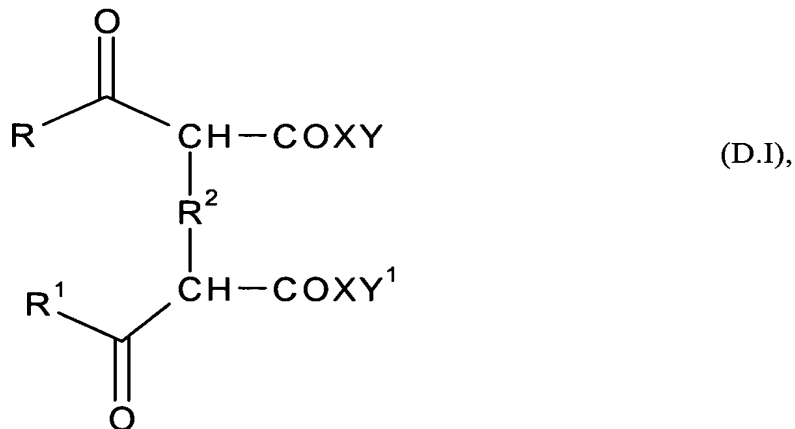
wherein the substituents have the meanings as defined by the general formulas (C.I) and (C.II) and

R^{21} represents C_5 - to C_{23} -alkyl, branched or unbranched, saturated, optionally as far as non-adjacently diunsaturated;

R^{22} , R^{24} are C_1 - to C_6 -alkylene and

R^{23} is methyl, ethyl, propyl, or a polyether group $[-O(R^6-O)_x-]$.

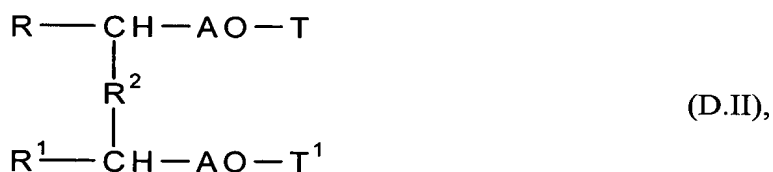
24. A surfactant composition according to any one of claims 1 to 13, **characterized in that** the gemini surfactant has the general formula (D.I)



wherein the substituents have the following meanings:

- R, R¹** C₅- to C₃₀-alkyl, branched or unbranched, saturated, optionally as far as non-adjacently diunsaturated, hydroxy-substituted or perfluorinated;
- R²** C₁- to C₁₀-alkylene, arylene, or the hydroxy-substituted derivatives thereof, a polyether [-O(R⁴O)_x-], -S-, -SO₂-, -O-, -S-S-, -O-R⁵-O-, or -S-R⁵-S-; variable for a direct bond between the two α-carbons;
- R⁴** C₂- to C₄-alkylene;
- R⁵** C₁- to C₁₀-alkylene, arylene, or alkyl arylene, -N(R⁶)-, or -(NR⁶)-R⁷-(NR⁶)-;
- R⁶** C₁- to C₆-alkyl;
- R⁷** C₁- to C₆-alkyl, wherein R⁷ and R⁶ can also be part of a heterocyclic ring;
- X** polyether [-O(R⁴O)_x-], wherein x is a number from 1 to 30, -O-, NZ;
- Z** C₁- to C₁₀-alkyl, aryl, alkylaryl, or H, and
- Y, Y¹** are independently H, -CH₂-COOH and salts, a hydrocarbon radical having at least two hydroxyl groups, such as erythrose, threose, ribose, arabinose, xylose, fructose, lyxose, allose, altrose, glucose, mannose, galactose, and mixtures thereof.

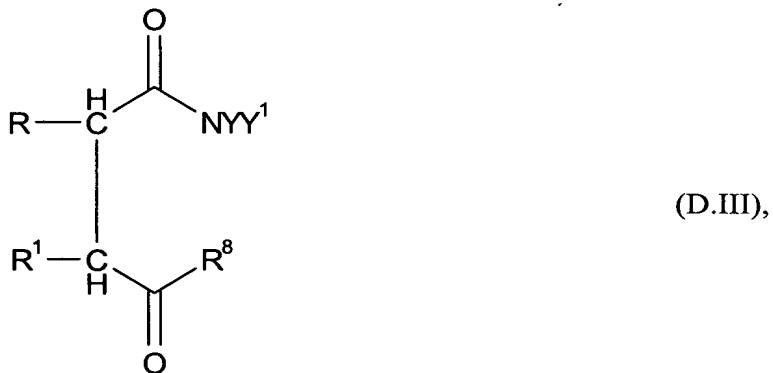
25. A surfactant composition according to any one of claims 1 to 13, **characterized in that** the gemini surfactant has the general formula (D.II)



wherein the substituents have the meanings as defined by the general formula (D.I) of claim 24 and

AO means -C(O)-, -C(O)- [-O(R⁴O)_x-], -CH₂-[-O(R⁴O)_x-], -CH₂-O-;
T, T¹ are independently -OM, -H, -CH₃, -C₂H₅, -SO₃M, -CH₂COOM, -C₂H₄-COOM, -C₃H₆-SO₃M, -O-P(O)(OM)₂ and
M is alkyl, ½ alkaline earth, ammonium, mono-, di-, trialkanolammonium, or H.

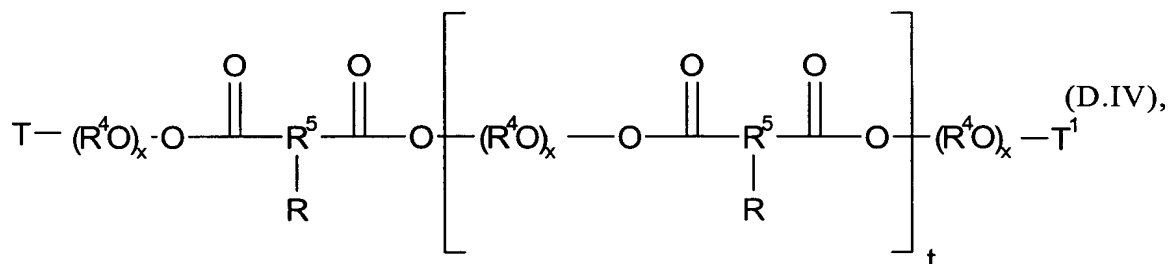
26. A surfactant composition according to any one of claims 1 to 13, **characterized in that** the gemini surfactant has the general formula (D.III)



wherein the substituents have the meanings as defined by the general formulas (D.I) of claim 24 and (D.II) of claim 25 and

R⁸ represents NYY¹, -O(R⁴O)_xH or -O(R⁴O)_x-C(O)-CHR-CHR¹-C(O)NYY¹.

27. A surfactant composition according to any one of claims 1 to 13, **characterized in that** the gemini surfactant has the general formula (D.IV)



wherein the substituents have the meanings as defined by the general formula (D.I) of claim 24, (D.II) of claim 25, and (D.III) of claim 26, and

t is an integer from 1 to 100, preferably 1 to 20, most preferably 1 to 4.

- 5
28. A surfactant composition according to any one of claims 1 to 4, **characterized in that** the surfactant composition comprises a gemini surfactant of the general formula (AI) as component (A) and sulfosuccinate, acyllactylate, alkyl isethionates, betaines, and/or acylglutamates as component (B).
- 10
29. A surfactant composition according to any one of claims 1 to 4, **characterized in that** the surfactant composition comprises a gemini surfactant of the general formula (AIII) as component (A) and acyllactylates and/or acylglutamates as component (B).
- 15
30. A surfactant composition according to any one of claims 1 to 4, **characterized in that** the surfactant composition comprises a gemini surfactant of the general formula (CII) as component (A) and acyllactylates, acylglutamates, and/or alkyl isethionates as component (B).
- 20
31. A surfactant composition according to any one of claims 1 to 4, **characterized in that** the surfactant composition comprises a gemini surfactant of the general formula (DI) as component (A) and acyllactylates, acylglutamates, and/or alkyl isethionates as component (B).
- 25
32. A surfactant composition according to any one of claims 1 to 4, **characterized in that** the surfactant composition comprises a gemini surfactant of the general formula (DI) as component (A) and acyllactylates, acylglutamates, and/or alkyl isethionates as component (B).
- 30
33. The use of the surfactant composition as claimed in any one of the preceding claims as a constituent of skin and hair cleaning preparations.
- 35